UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,469	02/27/2002	Fumirou Abe	826.1795	4737

21171	7590	02/17/2005

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EXAMINER
WU, YICUN

ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td></tr>
<tr><td>10/083,469</td><td>ABE ET AL.</td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>Yicun Wu</td><td>2165</td><td></td></tr>
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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _09 September 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-9_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-9_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

III. DETAILED ACTION

1. Claims 1-9 are presented for examination.

Response to Applicant' Remarks

2. Examiner has completed a through study of Applicant's amendment of September 9, 2004.

3. Examiner has carefully and thoroughly studied and reviewed Applicant's amendment of 9-9-2004. Examiner asserts that Akizawa et al. teaches Applicant's claimed invention of a full text search system.

In addition, the specially discussed feature of the claimed invention ("a plurality of search processing apparatuses in which locations of search-target character string data and character string search conditions are instructed, and search results responding to the instructions are accordingly outputted ") is very clearly discussed in Akizawa et al. (i.e. each of the plurality of symbol strings of interest are divided into at least two partial symbol strings at any position thereof) (col. 5, lines 15-25).

Examiner's comments regarding applicant's remarks

4.   Argument 1, Regarding Applicant's comment, "the present invention enables parallel execution of search requests" (See Remarks page 7, paragraph 2).

Examiner asserts that Applicant did not claim "parallel execution of search requests" in Applicant's claims, therefore, examiner believes that Akizawa et al. does teach Applicant's invention.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated over Akizawa et al., (U. S. Patent No. 5,452,451).

As to Claims 1, 5-9, Akizawa et al. discloses a full text search system, comprising:

a plurality of search processing apparatuses in which
locations of search-target character string data and character
string search conditions are instructed, and search results
responding to the instructions are accordingly outputted (i.e.
each of the plurality of symbol strings of interest are divided
into at least two partial symbol strings at any position
thereof) (col. 5, lines 15-25); and

a search integration unit in which search-target character
string data is divided into a group of character string records
and allocated to one or more of the plurality of search
processing apparatuses, given character string search conditions
are transmitted to each of the search processing apparatuses as
search instructions, and search results are received from each
of the search processing apparatuses and are integrated (col. 5,
lines 15-25); and further comprising:

an update temporary memory unit which temporarily
stores new character string records to update the search-target
character string data (col. 5, lines 15-25);

an update record search instruction unit in which the new
character string records stored in the update temporary memory
unit are instructed to any one of the search processing
apparatuses determined in advance as a part of the search-target
character string data (col. 25, lines 62-67).

As to claim 2, <u>Akizawa et al.</u> discloses a full text search system further comprising:

an update result reflection unit in which old records before being updated corresponding to the new records stored in the update temporary memory unit is deleted from the search-target character string data, and the new records are incorporated into the search-target character string data (col. 25, lines 62-67).

As to claim 3, <u>Akizawa et al.</u> discloses a full text search system further comprising:

a search result receiving time storing unit in which after the search integration unit transmits search instructions to the plurality of search processing apparatuses, the time when search results are received from each search processing apparatus is stored (col. 25, lines 62-67); and

a breakdown search processing apparatus judgement unit in which the search processing apparatus which cannot receive search results within a preset time from the search result receiving time received first which is stored in the search result receiving time storing unit is judged to be a defective apparatus (col. 25, lines 62-67).

As to claim 4, <u>Akizawa et al</u>. discloses a full text search wherein when the breakdown search processing apparatus judgement unit judges the search processing apparatus to be defective, the search integration unit revokes all the search results transmitted from the plurality of search processing apparatuses, and after incorporating the new records stored in the update temporary memory unit into the search-target character string data by instructing the update result reflection unit (col. 5, lines 1-67), the search integration unit divides the search-target character string data and allocates the divided data to usable search processing apparatuses except the search processing apparatuses which are judged to be defective and the search processing apparatuses which have been instructed to execute search processing by the update record search instruction unit, and instructs the usable search processing apparatuses to execute search (col. 25, lines 62-67 and col. 5, lines 1-67).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which the subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

8.   Claims 1-9 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bjornson et al. (U.S. Patent 6,691,109) in

view of Shapira (U.S. Patent 6,738,779).

    As to Claim 1, 5-8, Bjornson et al. discloses a full text

search system, comprising:

    a plurality of search processing apparatuses in which

locations of search-target string data and character string

search conditions are instructed (col. 3, lines 60-67), and

search results responding to the instructions are accordingly

outputted (col. 4, lines 1-9); and

a search integration unit in which search-target string

data is divided into a group of string records and allocated to

one or more of the plurality of search processing apparatuses

(col. 3, lines 60-67),

given character string search conditions are transmitted to

each of the search processing apparatuses as search instructions

(col. 3, lines 60-67), and

search results are received from each of the search

processing apparatuses and are integrated (col. 4, lines 1-9);

and further comprising:

an update temporary memory unit which temporarily

stores new records to update the search-target string data (col.

4, lines 12-29);

an update record search instruction unit in which the new

string records stored in the update temporary memory unit are

instructed to any one of the search processing apparatuses

determined in advance as a part of the search-target string data

(col. 4, lines 12-29 and fig. 5).

Bjornson et al. does not explicitly teach character string.

Shapira teaches character string (i.e. character stream.

col. 2, line 25).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bjornson et al. with character string.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bjornson et al. by the teaching of Shapira because providing character string allows an effective and computationally efficient mechanism as taught Shapira (col. 1, lines 61-64).

As to Claim 2, Bjornson et al. as modified teaches a full text search system further comprising:

an update result reflection unit in which old records before being updated corresponding to the new records stored in the update temporary memory unit is deleted from the search-target character string data (Bjornson et al. col. 4, lines 12-29 and fig. 5), and

the new records are incorporated into the search-target character string data (Bjornson et al. col. 4, lines 12-29 and fig. 5).

As to claim 3, Bjornson et al. as modified teaches a full text search system further comprising:

a search result receiving time storing unit in which after

the search integration unit transmits search instructions to the

plurality of search processing apparatuses (Bjornson et al. col.

4, lines 12-29 and fig. 5), the time when search results are

received from each search processing apparatus is stored

(Bjornson et al. col. 4, lines 12-29 and fig. 5); and

a breakdown search processing apparatus judgement unit in

which the search processing apparatus which cannot receive

search results within a preset time from the search result

receiving time received first which is stored in the search

result receiving time storing unit is judged to be a defective

apparatus (Bjornson et al. col. 4, lines 12-29 and fig. 5).

As to claim 4, Bjornson et al. as modified teaches a full

text search wherein

when the breakdown search processing apparatus judgement

unit judges the search processing apparatus to be defective

(Bjornson et al. col. 14, lines 35-40 and fig. 1 and 5),

the search integration unit revokes all the search results

transmitted from the plurality of search processing apparatuses

(Bjornson et al. col. 14, lines 35-40 and fig. 1 and 5), and

after incorporating the new records stored in the update

temporary memory unit into the search-target character string

data by instructing the update result reflection unit (<u>Bjornson</u>

<u>et al.</u> col. 14, lines 35-40 and fig. 1 and 5),

the search integration unit divides the search-target

character string data (i.e. character stream. <u>Shapira</u> col. 2,

line 25) and allocates the divided data (<u>Bjornson et al.</u> col. 4,

lines 12-29 and fig. 5) to usable search processing apparatuses

except the search processing apparatuses which are judged to be

defective and the search processing apparatuses which have been

instructed to execute search processing by the update record

search instruction unit (<u>Bjornson et al.</u> col. 14, lines 35-40

and fig. 1 and 5), and

instructs the usable search processing apparatuses to

execute search (<u>Bjornson et al.</u> col. 14, lines 35-40 and fig. 1

and 5).

As to claim 9, <u>Bjornson et al.</u> as modified teaches a full

text search method wherein

receiving a plurality of search requests (<u>Bjornson et al.</u>

col. 4, lines 12-29 and fig. 5) from terminals requesting to

search a search target data having character strings (i.e.

character stream. <u>Shapira</u> col. 2, line 25);

executing the plurality of search requests from the terminals in parallel via a plurality of search processing apparatuses (Bjornson et al. col. 4, lines 12-29 and fig. 5); and

automatically adding new data to the search tartlet data based on request from at least one of the terminals while the plurality of search requests are processed (Bjornson et al. col. 4, lines 12-29 and fig. 5),

wherein the search target data is logically divided into regions, to correspond to the plurality of search processing apparatuses and the regions are allocated to the plurality of search processing apparatuses for executing searches based on the plurality of search requests (Bjornson et al. col. 4, lines 12-29 and fig. 5).

Points of contact

9.   Any inquiry concerning this communication or earlier

communications from the examiner should be directed to Yicun Wu

whose telephone number is 571-272-4087. The examiner can

normally be reached on 8:00 am to 4:30 pm, Monday -Friday.

If attempts to reach the examiner by telephone are

unsuccessful, the examiner's supervisor, Dov Popovici can be

reached on 571-272-4083. The fax phone numbers for the

organization where this application or proceeding is assigned

are 703-872-9306.

Any inquiry of a general nature or relating to the status

of this application or proceeding should be directed to the

receptionist whose telephone number is 571-272-2100.

Yicun Wu
Patent Examiner
Technology Center 2100

CHARLES RONES
PRIMARY EXAMINER

February 06, 2005